

[Abstract] **ABSTRACT OF THE DISCLOSURE**

A diaphragm pump comprises a two part casing formed of a front cover [(10)] and a back cover [(12)]. A diaphragm plate [(14)] extends across the covers [(10,12)] and is secured therebetween when the covers [(10,12)] are fastened together. The diaphragm plate [(14)] has a plurality of similarly defined circular regions [(16)]. The front cover [(10)] has substantially axially aligned inlet and outlet ports [(18)], each leading to mutually exclusive inlet and outlet chambers [(22,24)] respectively. A valve housing [(26)] is securable inside the front cover [(10)] and has defined therein an outlet dished valve seat (28) with a correspondingly concave resilient valve (30) seated therein. The outlet valve seat [(28)] has fluid passages therethrough. A plurality of inlet valve seats [(34)] is provided, equal in number to the number of regions, each being similarly dished and having a correspondingly concave resilient valve [(36)] seated therein. Each inlet valve seat (34) has fluid passages therethrough. The outlet valve [(30)] is in fluid communication with the outlet chamber [(24)] and the inlet valves [(36)] are in fluid communication with the inlet chamber [(22)]. A wobble plate [(40)] is positioned in the back cover [(12)] and has a central boss [(42)] and a plurality of similar piston sections [(44)] equal in number to the number of circular regions [(16)] on the diaphragm plate [(14)]. The piston sections [(44)] and circular regions [(16)] are correspondingly secured together. The wobble plate [(40)] is subject to nutating motion to cause reciprocating action by the circular regions [(16)] and provide a pumping action.